

**IN THE CLAIMS:**

The following listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

103. (New) A system for enabling remote access to applications residing on a processing system comprising:

a firewall system interposed between a first system and a second system, wherein the first system comprises:

a user device connected to the gateway via a first network, wherein the user device comprises a client; and

a gateway connected to an insecure side of the firewall via a second network, wherein the gateway comprises an instance of a remote gateway agent,

wherein the second system comprises:

a processing system connected to a secure side of the firewall, wherein the processing system comprises an instance of a remote proxy agent and at least one application,

wherein the remote gateway agent is configured for:

receiving at the remote gateway agent a client registration request from the remote proxy agent, wherein the client registration request creates a client-to-server connection

through the firewall between the remote proxy agent and the remote gateway agent;

receiving a request from the user device for a task to be performed by the at least one application residing on the processing system; and

forwarding the task request to the remote proxy agent residing on the processing system via the remote gateway agent to the registered remote proxy agent, and

wherein the remote proxy agent comprises an interface to the at least one application and is configured for:

sending the client registration request to the remote gateway agent;

receiving and analyzing the task request from the remote gateway agent;

selecting and executing the at least one application via the interface to process the request; and

sending a result from the remote proxy agent to the remote gateway agent via the client-to-server connection through the firewall.

104. (New) The system of claim 103, wherein the processing system is selected from the group consisting of a personal computer, a multipurpose printing center, and a computer-connected peripheral.

105. (New) The system of claim 103, wherein the at least one application is selected from the group consisting of an e-mail application, a word processing application, a facsimile application, a telephony application, and an operating system component application.

106. (New) The system of claim 103, wherein the request is selected from the group consisting of searching a directory, opening a target file, accessing an e-mail application, sending a fax, reading a document over a dialed telephone connection, powering on a device connected to the one or more data processing computers, and powering off the device connected to the one or more data processing computers.

107. (New) The system of claim 103, wherein the remote gateway agent is further configured for determining whether the user device is entitled to direct the request to the processing system.

108. (New) The system of claim 103, wherein the first network is a wireless network and the user device is a wireless device.

109. (New) The system of claim 103, wherein the second network is the Internet.

110. (New) The system of claim 103, wherein the request specifies a serial execution of serial tasks and return of results.

111. (New) The system of claim 103, wherein a plurality of requests is sent to the one or more data processing computers in an un-interrupted data session.

112. (New) The system of claim 103, wherein the remote gateway agent is further configured for receiving the result, and sending at least part of the result to the user device via the first network.

113. (New) The system of claim 112, wherein the gateway server instance is further configured for transcoding the result for viewing by the user device prior to sending the result to the user device.

114. (New) A method for enabling remote data access to applications residing on a processing system comprising:

configuring a remote proxy agent on the processing system;

configuring a remote gateway agent on a gateway;  
interposing a firewall between the processing system and the gateway, wherein the processing system resides on the secure side of the firewall and the gateway resides on the insecure side of the firewall;  
receiving at the remote gateway agent a client registration request from a remote proxy agent, wherein the client registration request creates a client-to-server connection through the firewall;  
registering the remote proxy agent with the remote gateway agent;  
configuring an interface between the remote proxy agent and the at least one application residing on the processing system;  
receiving at the remote gateway agent a request for access to the processing system from a user device via a first network;  
forwarding the request for access to the processing system;  
receiving and analyzing the request from the remote gateway agent at the remote proxy agent;  
executing the selected application via the interface to process the request; and  
sending a result from the remote proxy agent to the remote gateway agent via the client-to-server connection through the firewall.

115. (New) The method of claim 114, wherein the processing system is selected from the group consisting of a personal computer, a multipurpose printing center, and a computer-connected peripheral.

116. (New) The method of claim 114, wherein the at least one application is selected from the group consisting of an e-mail application, a word processing application, a facsimile application, a telephony application, and an operating system component application.

117. (New) The method of claim 114, wherein the request is selected from the group consisting of searching a directory, opening a target file, accessing an e-mail application, sending a fax, reading a document over a dialed telephone connection, powering on a device connected to the one or more data processing computers, and powering off the device connected to the one or more data processing computers.

118. (New) The method of claim 114 further comprising determining at the remote gateway agent whether the user device is entitled to direct the request to the processing system.

119. (New) The method of claim 114, wherein the first network is a wireless network and the user device is a wireless device.
120. (New) The method of claim 114, wherein the second network is the Internet.
121. (New) The method of claim 114, wherein the request specifies a serial execution of serial tasks and return of results.
122. (New) The method of claim 114, wherein a plurality of requests is sent to the one or more data processing computers in an un-interrupted data session.
123. (New) The method of claim 114 further comprising receiving the result at the remote gateway agent and sending at least part of the result to the user device via the first network.
124. (New) The method of claim 123 further comprising transcoding the result for viewing by the user device prior to sending the result to the user device.
125. (New) A remote proxy agent residing in a processing system for enabling remote data access applications comprising:
- a registration processor comprising instructions for sending a registration request to a remote gateway agent residing on a gateway via a first network, wherein the client registration request creates a client-to-server connection through a firewall interposed between the remote proxy agent and the remote gateway agent and wherein the gateway is accessible to a user device via a second network;
  - a request analyzer configured for receiving, parsing and verifying a task request forwarded by the remote gateway agent from the user device;
  - a request processor configured for processing the task request for task-performance instructions;
  - an application program interface configured for sending the task-performance instruction to at least one application residing on the processing system; and
  - a results processor configured for sending a result from the software application to the remote gateway agent for forwarding to the user device.
126. (New) The system of claim 125, wherein the processing system is selected from the group consisting of a personal computer, a multipurpose printing center, and a computer-connected peripheral.
127. (New) The system of claim 125, wherein the at least one application is selected from the group consisting of an e-mail application, a word processing application, a facsimile application, a telephony application, and an operating system component application.

128. (New) The system of claim 125, wherein the request is selected from the group consisting of searching a directory, opening a target file, accessing an e-mail application, sending a fax, reading a document over a dialed telephone connection, powering on a device connected to the one or more data processing computers, and powering off the device connected to the one or more data processing computers.

129. (New) The system of claim 125, wherein the remote gateway agent is further configured for determining whether the user device is entitled to direct the request to the processing system.

130. (New) The system of claim 125, wherein the second network is a wireless network and the user device is a wireless device.

131. (New) The system of claim 125, wherein the first network is the Internet.

132. (New) The system of claim 125, wherein the request specifies a serial execution of serial tasks and return of results.

133. (New) The system of claim 125, wherein a plurality of requests is sent to the one or more data processing computers in an un-interrupted data session.

134. (New) The system of claim 125, wherein the remote gateway agent is configured for receiving the result, and sending at least part of the result to the user device via the second network.

135. (New) The system of claim 134, wherein the gateway server instance is further configured for transcoding the result for viewing by the user device prior to sending the result to the user device.